

ART. VIII. A NEW SCOLECODONT GENUS, *ILDRAITES*,
FROM THE UPPER DEVONIAN OF NEW YORK

By E. R. ELLER

In a paper published in 1934¹ the writer described among other genera four species of *Arabellites*, polychæte annelid jaws or scolecodonts. Three of these species, *Arabellites spatiosioris*, *Arabellites latus*, and *Arabellites alfredensis* resembled each other quite closely, differing only in size, sculpture of the surface, and character of the denticles. One species, *Arabellites bipennis*, was quite unlike the other three. In this description the writer remarked that the jaws did not correspond (since this posterior margin is incurved) to any figured by other authors, except possibly a species, *Arabellites spicatus* figured by Hinde,² but that the anterior portion including the hook and denticles compared well with *Arabellites alfredensis*.

In the collecting season of 1935, the writer had the good fortune to find an articulated annelid jaw assemblage, plate XI, fig. 1, at Alfred Station, New York, in the Alfred Shale, a local facies of the Gowanda beds, Canadaway Group of recent workers, and historically known as the Chemung of the Upper Devonian. The maxillæ I of this new articulated jaw apparatus corresponds to *Arabellites bipennis*, plate XXIII, figs. 8-10, and maxillæ II to *Eunicites anchoralis*, plate XXII, figs. 1-5 of the former paper. This new specimen again brought to the mind of the writer the question as to whether *Arabellites bipennis* and *Arabellites spicatus* Hinde should not be considered as generically different from the genus *Arabellites*. With this in mind the writer reviewed the various material and has decided to place the jaws of this kind in a new genus.

Genus *ILDRAITES*, gen. nov.

Genotype *Arabellites bipennis* Eller

The anterior extremity of the jaws of maxillæ I has an extremely prominent pointed hook and a row of several usually acute denticles

¹Ann. Car. Mus., Vol. XXII, pp. 303-316, pls. XXII, XXIII, 1934.

²Bihang till k. Svensk. Handl., Vol. 7, N:o5, p. 18, pl. 2, figs. 47-49, 1882.

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along the nearly straight inner lateral margin. The anterior part is very similar to *Arabellites*. The posterior portion is sickle-shaped by a deep crescent-shaped bight while the posterior end of *Arabellites* is obliquely truncate. The reason for erecting a new genus is based primarily on this difference in the posterior portion of the jaw (maxillæ I). This structural difference probably depends on a type of muscular attachment in the jaws which was different from that of other genera and it might be also reflected in the general morphology of this annelid. In other words, this structure suggests such alterations in the structure of the animal that generic separation of corresponding forms becomes, in the opinion of the writer, quite necessary.

Ildraites bipennis (Eller)

MAXILLÆ I, II, and III or IV (?), MANDIBLE (?)

Arabellites bipennis Eller. Ann. Car. Mus., 1934, Vol. XXII, p. 311, pl. XXIII, figs. 8, 9, 10.

Eunicites anchoralis Eller. Ann. Car. Mus., 1934, Vol. XXII, p. 307, pl. XXII, figs. 1-5.

MAXILLÆ I

The paired jaws of maxillæ I were lying on the top of the jaws of maxillæ II especially along the inner lateral margin. During the cleaning off of the outer lateral margin of maxillæ II the part covering maxillæ I was destroyed and now we have only a partial impression of the latter. However, enough of the maxillæ I is preserved to give a clear idea about its form. The ends of both hooks are absent, not being preserved even as impressions. On the right jaw the impression of several denticles is discernible.

MAXILLÆ II

The jaws of maxillæ II resemble *Eunicites anchoralis* of the former paper. The jaws under consideration in the present paper are complete except that the ends of the hooks and two of the denticles of the left jaw are broken off. The jaws are longer and they bear several more denticles than those figured before. The anterior part bears a bight corresponding in its general form to that of maxillæ I. The denticles are asymmetrical and have a well-worn appearance. Some of the denticles appear to have a groove in their middle. All denticles

are bent upwards and inwards at more than 45° which is probably due to compression since in other specimens of this species the denticles lay in the same plane as the jaw. Under high magnification the surface of the jaws seems to be slightly pitted and also covered with minute tubercles.

MAXILLÆ III or IV

Near the left jaw of maxillæ II and partly under it is seen a jaw of maxillæ III or IV. The jaw has a row of blunt denticles along its inner margin. So little of the jaw is visible that it is not possible to describe it in any detail. However, due to its large size the jaw probably belongs to maxillæ III, although it is not possible to be positive about it.

MANDIBLE (?)

In front of the jaw apparatus is seen an extremely thin, chitinous-like plate that extends back under the left jaws of maxillæ I and II. It was impossible to remove any of the matrix without breaking the jaw. The size and character of this jaw part suggests the possibility that it may be a mandible.

In examining the jaw apparatus no apertures or irregularities on the surface for the attachment of muscles have been found. It is interesting to note that a similar bighted structure is present on both the jaws of maxillæ I and maxillæ II. On maxillæ I it is a deep indentation in the posterior area with two shanks. In the jaws of maxillæ II the anterior margin is extended into a shank which forms the characteristic bight. These shanks and bights were probably for the attachment of the muscular system. In the modern family *Leodicidæ* many of the maxilla II have also deep indentations in the posterior area.

EXPLANATION OF PLATE XI

Figure magnified 45 times.

FIG. 1 *Ildraites bipennis* (Eller) Alfred Station, New York.

Maxillæ I, impression, left and right jaws.

Maxillæ II, left and right jaws.

Maxillæ III or IV, left or right jaw, extends from under the left jaw of maxillæ II.

Mandible (?), seen near the anterior end of the left jaws of maxillæ I and II.

The type is in the Carnegie Museum, number 8049, Section of Invertebrate Paleontology.